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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/972,241 | 10/09/2001 | Takaaki Hashimoto | P21531 | 3966 |

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EXAMINER

JERABEK, KELLY L

ART UNIT PAPER NUMBER

2612

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/972,241

Applicant(s)

HASHIMOTO, TAKAAKI

Examiner

Kelly L. Jerabek

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-22 and 27 is/are allowed.
- 6) ☒ Claim(s) 1,3,5,10,23,26 and 28 is/are rejected.
- 7) ☒ Claim(s) 2,4,6-9,11-14 and 24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/19/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

Figure 10 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1, 3, 5, 10, 23 and 25-26 rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuzuki et al. US 6,086,267 in view of Applicant's admitted prior art.

Re claim 1, Tsuzuki discloses in figures 1-3 a quantity-of-light adjusting device placed between lens groups of a digital still camera or a video camera. The device includes a diaphragm blade (4), a diaphragm case (3) and a blade retainer (6). The blade retainer (6) is secured to the diaphragm case (3) in order to prevent the diaphragm blade (4) from coming off (col. 3, lines 5-9). Therefore, the examiner is reading the blade retainer (6) as a base plate for supporting the diaphragm. A stepping motor (1) drives the diaphragm blade (4) to each of the positions in figures 2(A) – 2(C) in order to adjust the size of the aperture opening that is placed in the optical axis (col. 3, line 38 – col. 4, lines 10). The diaphragm blade (4) is driven so that each of the openings (4c,4d,4e) can be placed in the optical axis. At position (P3) shown in figure 2(C) and ND filter (5) covering the small-aperture hole (4e) is brought into the optical axis. Therefore, the stepping motor (1) drives both the diaphragm blade (4) and a filter (5). Thus, the examiner is reading the stepping motor (1) as both a diaphragm driver as described above and a filter driver for moving an optical filter (5) into and out of an optical path. As shown in figure 3, the quantity-of-light adjusting device (14) is placed in a digital camera in front of a CCD (15) and between several lens groups (10,11,12,13). Although Tsuzuki discloses the above limitations he fails to distinctly state that the

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quantity-of-light adjusting device consisting of a diaphragm, a base plate, an optical filter and a motor is provided in a lens barrel.

The Applicant's conceded prior art discloses in figures 9A and 9B a CCTV surveillance camera with a camera body (10') and a lens barrel (18') containing a diaphragm (21') and a diaphragm driver (24). Light that is incident on the lens barrel (18') enters the camera body (10') to be incident on the CCD (11) (specification: page 2, lines 9-25). Therefore, it would have been obvious for one skilled in the art to have been motivated to include the concept of placing a diaphragm in a lens barrel as disclosed in the applicant's conceded prior art in the video camera including a quantity-of-light adjusting device as disclosed by Tsuzuki. Doing so would provide a means for allowing light to travel through a lens barrel, enter a camera body and to be incident on a CCD (specification: page 2, lines 20-25).

Re claim 3, the arm member (2) of the diaphragm blade (4) is pushed against stopper faces (3d,3e) by the stepping motor (1) in order to set the diaphragm blade (4) at the small-aperture position (P2) or the filter position (P3) (col. 4, lines 11-20). The filter is in the optical path when the diaphragm position is at (P3) and the filter is out of the optical path when the diaphragm is at (P2). Therefore, the Examiner is reading the stopper faces (3d,3e) as lock mechanisms since they lock the optical filter at positions both in and out of the optical path.

Re claim 5, the filter (5) that is bonded to the diaphragm blade (4) as disclosed by Tsuzuki is an ND filter. However, the applicant's conceded prior art states that it is well known in the art to insert an infrared absorbing filter into the optical axis of a television camera lens (specification: page 2, lines 9-20). Therefore, it would have been obvious for one skilled in the art to have been motivated to replace the ND filter bonded to the diaphragm blade as disclosed by Tsuzuki with an infrared absorbing filter as disclosed by the applicant's conceded prior art. Doing so would provide a means for positioning a near-infrared absorbing filter in the optical path in an imaging operation during the daytime so that a color-image taking operation is performed for light only in the visible light region (specification: page 1, line 20 – page 2, line 8).

Re claim 10, it is inherent that the infrared region of light ranges from approximately 700 to 1000 nanometers.

Re claim 23, the applicant's conceded prior art includes a CCTV camera provided with a lens barrel (18') fixed to the front of the camera body (10') (specification: page 2, lines 9-15).

Re claims 25 and 26, the applicant's conceded prior art states that an actuator such as a galvanometer type actuator (24) drives a diaphragm device (21') (specification: page 3, lines 1-10).

Allowable Subject Matter

Claims 2, 4, 6-9, 11-14, and 24 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fail to anticipate or render obvious the following technical features as recited in the highlighted claims:

Referring to claims 2, 4, 6-9, 11-14, and 24 the prior art fails to teach or suggest a diaphragm, base plate, diaphragm driver, optical filter, and filter driver provided in a lens barrel wherein a pair of diaphragm blades lie on a first surface of the base plate and wherein the filter supporting plate lies on a second surface of the base plate.

Claims 15-22 and 27 allowed.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fail to anticipate or render obvious the following technical features as recited in the highlighted claims:

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Referring to claims 15-22, and 27 the prior art fails to teach or suggest a diaphragm, base plate, diaphragm driver, optical filter, and filter driver provided in a lens barrel wherein a pair of diaphragm blades lie on either the front or rear surface of the base plate and wherein the filter supporting plate lies on either the front or rear surface of the base plate.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Edamitsu et al. (US 6,533,473) discloses an imaging apparatus with an exposure controlling mechanism. The information regarding diaphragms and ND filters is pertinent material.

Negishi et al. (US 6,817,788) discloses a diaphragm device. The information regarding driving a diaphragm and an optical filter in and out of the optical axis is pertinent material.

No (US 6,587,140) discloses a system and method for using a single intelligence circuit in a digital camera and a printer. The information regarding placing a filter in the optical axis of a camera is pertinent material.

Inoue et al. (US 2004/0076423) discloses an aperture diaphragm in an imaging device. The information regarding driving a diaphragm and an optical filter in and out of the optical axis is pertinent material.

Kaneda et al. (US 6,091,900) discloses a lens barrel and image pickup apparatus. The information regarding a diaphragm placed in the lens barrel of a camera is pertinent material.

Okano et al. (US 4,047,807) discloses a diaphragm device. The information regarding driving the diaphragm of a camera is pertinent material.

Akada et al. (US 5,689,746) discloses an amount-of-light adjusting device. The information regarding driving a diaphragm and a filter of a camera is pertinent material.

Arai (US2002/0003583) discloses a diaphragm apparatus of lens for a CCTV camera. The information regarding driving a diaphragm and a filter of a camera is pertinent material.

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Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly L. Jerabek whose telephone number is 703-305-8659. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone number for submitting all Official communications is 703-872-9306. The fax phone number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at 703-746-3059.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KLJ


TUAN HO
PRIMARY EXAMINER